

Rejection of Independent Claims 1, 16 and 31 Under 35 U.S.C. § 102(e)

Claims 1, 16 and 31 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Angel*. Applicant respectfully traverses this rejection. *Angel* does not teach all of the features recited in Applicant's independent Claims 1, 16 and 31.

A computer-implemented method for collecting information relating to execution of an application as claimed in Claim 1 comprises "determining a set of probe locations in the application at which collecting data relating to the execution of the application would produce non-redundant information; and inserting probes only at the determined probe locations in the application."

Angel teaches instrumenting a byte code computer program including examining the byte code, selecting portions of the byte code for instrumentation, and instrumenting the portions to provide instrumented byte code. The byte code instrumentation of *Angel* is implemented differently than the method for collecting information taught by Applicant's invention as claimed in Claim 1. Specifically, *Angel* does not teach "inserting probes only at...locations in the application" that "would produce non-redundant information". Since Applicant's Claim 1 includes limitations not found in *Angel*, Applicant's claimed invention is not anticipated by *Angel*.

Applicant refers to page 7, lines 18-25 of the specification to further illustrate Claim 1. Applicant's invention intelligently inserts probes into an application to collect enough information to measure the completion time of a function. Any redundant information that is not necessary to perform the completion time measurement is not collected. The effect of the instrumentation process on the application is reduced and normal operations proceed with less disruption, resulting in application performance that is measured with greater accuracy.

Claim 1 is not anticipated by *Angel* because *Angel* does not teach nor suggest a computer-implemented method for collecting information relating to execution of an application that insert probes only at locations in the application that produce non-redundant information. Rather, the system of *Angel* would presumptively instrument the entire application, leading exactly to the shortcomings identified by Applicant. Claims 16 and 31 are independent claims that directly correlate with Claim 1. Claims 16 and 31 are not anticipated by *Angel* for at least the same reasons that Claim 1 is patentable over *Angel*.

Rejection of Independent Claims 1, 16 and 31 Under 35 U.S.C. § 102(b)

Claims 1, 16 and 31 are rejected under 35 U.S.C. § 102(b) as being anticipated *Grossman*. Applicant respectfully traverses this rejection. *Grossman* does not teach all of the features recited in Applicant's Claim 1 and amended Claim 16.

A computer-implemented method for collecting information relating to execution of an application as claimed in Claim 1 comprises "determining a set of probe locations in the application at which collecting data relating to the execution of the application would produce non-redundant information; and inserting probes only at the determined probe locations in the application."

Grossman teaches intermediate representation instrumentation. Instrumentation of a computer program includes examining an initial intermediate representation of the program, selecting portions of the initial intermediate representation for instrumentation, and instrumenting the portions. The intermediate representation instrumentation of *Grossman* is implemented differently than the method for collecting information taught by Applicant's claimed invention in Claim 1. Specifically, *Grossman* does not teach "inserting probes only at...locations in the application" that "would produce non-redundant information". Since Applicant's Claim 1 includes limitations not found in *Grossman*, Applicant's claimed invention is not anticipated by *Grossman*.

Claim 1 is not anticipated by *Grossman* because *Grossman* does not teach nor suggest a computer-implemented method for collecting information relating to execution of an application that insert probes only at locations in the application that produce non-redundant information. Claims 16 and 31 are independent claims that directly correlate with Claim 1. Claims 16 and 31 are not anticipated by *Grossman* for at least the same reasons that Claim 1 is patentable over *Grossman*.

Rejection of Dependent Claims 2-4, 10, 17-19, 25, 32-34 and 40 Under 35 U.S.C. § 102

Claims 2-4, 10, 17-19, 25, 32-34 and 40 are rejected under 35 U.S.C. § 102 as being anticipated by *Angel* or *Grossman*. Applicant respectfully traverses this rejection. Claims 2-4 and 10 are dependent on the allowable Claim 1. Claims 2-4 and 10 are allowable for at least the same reasons that Claim 1 is patentable over *Angel* and *Grossman*. Claims 17-19 and 25 are dependent on the allowable Claim 16. Claims 17-19 and 25 are allowable for at least the same reasons that Claim 16 is patentable over *Angel* and *Grossman*. Claims 32-34 and 40 are

dependent on the allowable Claim 31. Claims 32-34 and 40 are allowable for at least the same reasons that Claim 31 is patentable over *Angel* and *Grossman*.

Rejection of Independent Claims 12, 27 and 42 Under 35 U.S.C. § 103(a)

Claims 12, 27 and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Angel* in view of *Grossman*. Applicant respectfully traverses this rejection. Neither *Angel* nor *Grossman*, nor any combination thereof, teach all of the features recited in Applicant's independent Claims 12, 27 and 42.

A computer-implemented method for collecting information relating to execution of an application as claimed in Claim 12 includes the steps of determining a set of probe locations in the application at which collecting data relating to the execution of the application would produce non-redundant information and inserting probes only at the determined probe locations in the application. *Angel* teaches instrumenting a byte code computer program including examining the byte code, selecting portions of the byte code for instrumentation, and instrumenting the portions to provide instrumented byte code. *Grossman* teaches intermediate representation instrumentation. Instrumentation of a computer program includes examining an initial intermediate representation of the program, selecting portions of the initial intermediate representation for instrumentation, and instrumenting the portions. The byte code instrumentation of *Angel* and the intermediate representation instrumentation of *Grossman* are implemented differently than the method for collecting information taught by Applicant's claimed invention in Claim 12. Specifically, neither *Angel* nor *Grossman* teach "inserting probes only at...locations in the application" that "would produce non-redundant information". Since Applicant's Claim 12 includes limitations not found in *Angel* or *Grossman*, Applicant's claimed invention is patentable over *Angel* and *Grossman*.

Claims 27 and 42 are independent claims that directly correlate with Claim 12. Claims 27 and 42 are patentable over *Angel* and *Grossman* for at least the same reasons that Claim 12 is patentable over *Angel* and *Grossman*.

Rejection of Dependent Claims 5-9, 11, 13-15, 20-24, 26, 28-30, 35-39, 41, 43-45 Under 35 U.S.C. § 103(a)

Claims 5-9, 11, 13-15, 20-24, 26, 28-30, 35-39, 41, 43-45 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Angel* in view of *Grossman*, *Angel* in view of *Yellin*,

or *Whygodny* in view of *Miller* and further in view of *O'Donnell*. Applicant respectfully traverses this rejection.

Claims 5-9 and 11 are dependent on the allowable Claim 1. Claims 5-9 and 11 are allowable for at least the same reasons that Claim 1 is patentable over *Angel* and *Grossman* as discussed above. Claims 13-15 are dependent on the allowable Claim 12. Claims 13-15 are allowable for at least the same reasons that Claim 12 is patentable over *Angel* and *Grossman* as discussed above. Claims 20-24 and 26 are dependent on the allowable Claim 16. Claims 20-24 and 26 are allowable for at least the same reasons that Claim 16 is patentable over *Angel* and *Grossman* as discussed above. Claims 28-30 are dependent on the allowable Claim 27. Claims 28-30 are allowable for at least the same reasons that Claim 27 is patentable over *Angel* and *Grossman* as discussed above. Claims 35-39 and 41 are dependent on the allowable Claim 31. Claims 35-39 and 41 are allowable for at least the same reasons that Claim 31 is patentable over *Angel* and *Grossman* as discussed above. Claims 43-45 are dependent on the allowable Claim 42. Claims 43-45 are allowable for at least the same reasons that Claim 42 is patentable over *Angel* and *Grossman*.

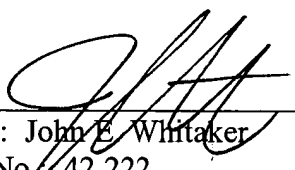
CONCLUSION

In summary, Applicant's claimed invention as amended is not anticipated by nor obvious over the cited art. For the reasons noted above it is respectfully submitted that all claims in this case are patentable. Thus, the application is in condition for allowance and should be passed to issue at an early date. Should any further aspects of the application remain unresolved, Examiner is invited to telephone Applicant's attorney at the number listed below.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

Claims 16, 27, 31 and 42 have been amended as follows:

16. (Amended) A computer-readable medium having an application including computer-executable instructions for:

determining a set of probe locations in the application at which collecting data relating to the execution of the application would produce non-redundant information; and
inserting probes only at the determined probe locations in the application.

27. (Amended) A computer-readable medium having an application including computer-executable instructions for:

determining entry and exit points of a plurality of functions constituting at least a portion of the application;

determining a set of probe locations in the application at which collecting data relating to the execution of the application would produce non-redundant information, the set of probe locations including at least the entry and exit points of the functions;

inserting probes only at the determined probe locations in the application;

using the inserted probes to collect the information relating to the execution of the application; and

analyzing the collected information.

31. (Amended) A computer arrangement configured to execute an application including computer-executable instructions for:

determining a set of probe locations in the application at which collecting data relating to the execution of the application would produce non-redundant information; and

inserting probes only at the determined probe locations in the application.

42. (Amended) A computer arrangement configured to execute an application including computer-executable instructions for:

determining entry and exit points of a plurality of functions constituting at least a portion of the application;

determining a set of probe locations in the application at which collecting data relating to the execution of the application would produce non-redundant information, the set of probe locations including at least the entry and exit points of the functions;

inserting probes only at the determined probe locations in the application;

using the inserted probes to collect the information relating to the execution of the application; and

analyzing the collected information.